

Title (en)
Radiation-curable, urethane-acrylate prepolymers and crosslinked polymers.

Title (de)
Durch Strahlung härtbare Urethan-Acrylatprepolymere und vernetzte Polymere.

Title (fr)
Prépolymères uréthane-acrylate durcissables par irradiation et polymères réticulés.

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Application
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Abstract (en)
A radiation-curable prepolymer of a polyurethane endtipped with an hydroxy (acrylate or methacrylate) is disclosed. The polyurethane is derived from the reaction of a polyfunctional isocyanate with a hydrolyzable oligomer of an anhydrous cyclic ester of an hydroxy acid. Crosslinked polymers prepared by irradiating the prepolymers are also disclosed. The crosslinked polymers are bioabsorbable and biocompatible with bodily tissue, yet still maintain the outstanding mechanical properties one would expect from a polyurethane. The prepolymers and crosslinked polymers are especially well-suited for the fabrication of surgical devices, particularly wound closure devices such as surgical staples and clips, in a stereolithography apparatus.

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